

Abstract of the Disclosure

In the reaction of catalytic gas phase oxidation induced by the supply of at least a raw material to be oxidized and a molecular oxygen-containing gas to a reactor for catalytic gas phase oxidation, a method for starting up the reactor for catalytic gas phase oxidation is disclosed which is characterized by causing the raw material and the molecular oxygen-containing gas to pass a range in which the concentration of the raw material is less than the lower explosion limit of the raw material and the concentration of oxygen is not less than the limiting oxygen concentration, but excluding the concentration of the raw material of 0 vol. %. The method enables the reactor to be started up economically and safely by avoiding the explosion range induced by the composition of a raw material and a molecular oxygen-containing gas supplied to the reactor and decreasing the amount of a diluting gas to be supplied.